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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/504,156	02/15/2000	Jordan Brown	SUNB1P376/P4382	7524

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EXAMINER
KENDALL, CHUCK O

ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/504,156	BROWN ET AL.
	Examiner	Art Unit
	Chuck O Kendall	2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-52* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Detailed Action

Examiners Response

1. A request for continued examination under 37 CFR 1.114, including the

fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection.

Since this application is eligible for continued examination under 37 CFR 1.114,

and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the

previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 01/29/2004 has been entered.

Claim Rejections -- 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis

for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

3. Claims 1, 2, 7 – 20, 22 – 24, 26, 29, 35, 38, 43, 46 & 49 are rejected under

35 U.S.C. 103(a) as being unpatentable over Preisler et al. USPN 5,675,803

(hereinafter "Preisler") in view of Kirouac et al. USPN " hereinafter Kirouac").

Regarding claim 1, Preisler discloses a computer system providing a set

of software system services, a method of providing replacement functions for a

the set of software system services, comprising:

the primitive function replicating the one of the set of software system

services in a manner such that implementation of the primitive function reduces

or eliminates reliance on one or more system functions capable of becoming

non-functional in the event of system error (5: 60-65, see patch sites and patch

area instruction, and see 6:27-37); and receiving an identifier associated with the

requested primitive function at the one of the set of software system services

from another one of the set of software system services, thereby enabling the

one of the set of software system services to call the primitive function via the

identifier associated with the requested primitive function (5:60-65, and 6:22-25).

Preisler doesn't explicitly disclose sending a request for primitive function

from one of the set of software system services to another one of the set system

services. However, Kirouac does disclose this feature in an analogous art (9: 15

– 20), stating that " the central and remote computer systems is capable of

upgrading the software used in the remote computer system at any time and has

multi-tasking capabilities to allow a plurality of remote computer systems to gain

access to the central computer system at the same time.". Therefore, it would

have been obvious to one of ordinary skill in the art at the time the invention was

made to combine Preisler and Kirouac because, patching or replacing data

remotely is more dynamic and makes modifies software systems more efficiently.

Regarding claim 2, the method as recited in claim 1, wherein sending a

request for a primitive function and receiving the identifier associated with the

requested primitive function is performed only when the one of the set of

software system services performs a debugging function (Preisler, 6:27 – 37).

Regarding claim 7, see reasoning as previously discussed in claim 1.

Regarding claim 8, the method as recited in claim 7, wherein the primitive

function information includes a pointer to the primitive function (Preisler, 5:33).

Regarding claim 9, the method as recited in claim 7, wherein the primitive

function information includes state information data to be provided to the primitive

function when the primitive function is called (Preisler, 9:5 – 20).

Regarding claim 10, the method as recited in claim 7, further comprising:

repeating the sending, returning, and storing steps over multiple layers of the

stack such that a stack of primitive mechanisms parallel to the stack of software

system services is assembled (Preisler,10:10 – 20).

Regarding claim 11, see claim 4 for reasoning.

Regarding claim 12, see claim 2 for reasoning.

Regarding claim 13, see claim 1 for reasoning.

Regarding claim 14, the system as recited in claim 13, further comprising:

a primitive function calling mechanism adapted for calling one or more

primitive software functions associated with the one or more identifiers returned

by the primitive function request mechanism (Preisler, 5: 35 – 40).

Regarding claims 15, The system as recited in claim 14, wherein the

primitive function calling mechanism is associated with one tar more; of the set of

software components (Preisler, 6:1 –10, for components see objects).

Regarding claim 16, the system as recited, in claim 13, wherein the one or more of the set of primitive software functions replace one or more of the set of services when the set of services are determined to be inoperative (Preisler, 10:35 – 50, for inoperative see error).

Regarding claim 17, see claim 2 for reasoning also see (Preisler, 9: 9 – 15).

Regarding claim 18, Preisler discloses all the claimed limitations as applied in claim 13. Preisler doesn't explicitly disclose state information associated with each of the set of components, the state information including data that enables the corresponding service to communicate with another one of the set of services. However, Kirouac does disclose this in an analogous art (2: 13 – 17, see verify), stating that verifying is done to make ensure software has been properly upgraded. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Preisler and Kirouac because, providing state/verification information during data transmission ensures efficient transmission of data.

Regarding claim 19, see claim 9 for reasoning.

Regarding claim 20, see claim 3 for reasoning.

Regarding claim 22, see claim 1 for reasoning.

Regarding claim 23, see claim 7 for reasoning.

Regarding claim 24, see claim 14 for reasoning.

Regarding claims 26, 35, 43 & 46, which cites similarly as claim 2 see rationale as previously discussed above.

Regarding claims 29, 38 and 49, Preisler discloses all the claimed limitations as applied in claim 1, 7 and 13. Preisler doesn't explicitly disclose polling (requests). However, Kirouac does disclose this feature in an analogous art (9: 15 – 20), stating that " the central and remote computer systems is capable of upgrading the software used in the remote computer system at any time and has multi-tasking capabilities to allow a plurality of remote computer systems to gain access to the central computer system at the same time.". Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Preisler and Kirouac because, being able to receive or request from multiple sources enable more efficient data communication.

4. Claims 3 – 6, 21, 25, 27, 28, 33, 34,36, 37, 42, 44, 45, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Preisler et al. USPN 5,675,803 (hereinafter "Preisler") in view of Kirouac et al. USPN " hereinafter Kirouac") as applied in claims 1,7, & 13 and further in view of Ahlin et al. USPN 5,321,840.

Regarding claims 3, 27,28, 33, 36, 37, 42, 44, 47 and 48 Preisler and Kirouac disclose all the claimed limitations as applied in claims 1, 7 and 13. The combination of Preisler and Kirouac doesn't explicitly disclose input and output functions. However, Ahlin does disclose this functionality in an analogous art (12: 3 – 10 see display functions and keyboard functions), stating that the bios which supports the input and output functionality of the system, e.g. keyboard, can be downloaded from a Network when needed. Therefore it would have been

obvious to one of ordinary skill in the art at the time the invention was made to combine Preisler and Kirouac with Ahlin because, updating the bios would enable modification of keyboard functions.

Regarding claim 4, method of providing replacement functions for a stack of software system services, the stack of software system services including one or more layers, each layer representing one of the software system services, wherein lower layers provide services to upper layers in the stack, (Preisler, 6:65 -7:5), the method comprising:

sending a primitive function request for a primitive function down from one of the layers of the stack of software system services to another one of the layers in the stack of software system services, the primitive function replicating the system service associated with the one of the layers in the stack (Preisler, 7:1-15);

when the another one of the layers is responsible for performing at least one of input and output, returning a primitive function identifier associated with the primitive function to the one of the layers of the stack of software system services (Preisler, 11:15 – 33, also see Ahlin 12: 3 – 10, for input and output).

Regarding claim 5, method as recited in claim 4, further comprising: when the another one of the layers is responsible for performing at least one of input and output, sending another primitive function request from the another one of the layers in the stack of software system services to a lower layer in the stack of software system services (Preisler, 11:20 – 25).

Regarding claim 6, the method as recited in claim 4, further comprising:

propagating the primitive function request down the one or more lay of the

stack of software system services (Preisler, 7:1 – 20).

Regarding claims 21, 25, 34 & 45 Preisler and Kirouac disclose all the

claimed limitations as applied in claims 1, 7 and 13. The combination of Preisler

and Kirouac doesn't explicitly disclose providing keyboard functionality.

However, Ahlin does disclose this functionality in an analogous art (12: 3 – 10),

stating that the bios which supports the input and output functionality of the

system, e.g. keyboard, can be downloaded from a Network when needed.

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made to combine Preisler and Kirouac with Ahlin because,

updating the bios would enable modification of keyboard functions.

5. Claims 31, 40 & 51 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Preisler et al. USPN 5,675,803 (hereinafter "Preisler") in view

of Kirouac et al. USPN " hereinafter Kirouac") as applied in claims 1, 7 and 13

and further in view of Glasser et al. USPN 5,793,980.

Regarding claims 31, 40 & 51 Preisler and Kirouac disclose all the claimed

limitations as applied in claims 1, 7 & 13. The combination of Preisler and

Kirouac does not disclose delay loops. However, Glasser does disclose this

function in an analogous art (9: 60), where Glasser uses the delay loop to

prolong selecting until to accommodate the user. Therefore it would have been

obvious for one of ordinary skill in the art at the time the invention was made to

combine, Preisler and Kirouac with Glasser because, a delay loop would enable

a user to delay a decision in the event of a query.

6. Claims 30, 32, 39, 41, 50 & 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Preisler et al. USPN 5,675,803 (hereinafter "Preisler") in view of Kirouac et al. USPN " hereinafter Kirouac"), as applied in claims 1, 7 and 13, and further in view of Halpern et al. USPN 6,282,711 B1.

Regarding claims 30, 39 & 50, Preisler discloses all the claimed limitations as applied in claims 1, 7 and 13 above. The combination of Preisler and Kirouac doesn't disclose without interrupts. However, Halpern does disclose this functionality (4: 5 – 15, see if interrupted continues), stating that the system transmits data without having to retransmit in the event of an interrupt thereby preventing retransmission of already transmitting data. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Preisler and Kirouac with Halpern because, transmitting data without interrupts makes transmitting data to a remote location more efficient.

Regarding claim 32, 41 & 52, Preisler discloses all the claimed limitations as applied in claims 1, 7 and 13 above. The combination of Preisler and Kirouac doesn't disclose without timers. However, Halpern does disclose this functionality (8: 55 – 60), stating that downloading software without time restrictions eliminates the penalty of receiving unnecessary data. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Preisler and Kirouac with Halpern because, transmitting data without time restrictions or timers makes transmitting data to a remote location more efficient.

Response to Arguments

7.   Applicant's arguments with respect to claims 1 – 52 have been considered but are moot in view of the new ground(s) of rejection.

Correspondence Information

8. Any inquires concerning this communication or earlier communications from the examiner should be directed to Chuck O. Kendall who may be reached via telephone at (703) 308-6608. The examiner can normally be reached Monday through Friday between 8:00 A. M. and 5:00 P. M. est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Tuan Dam can be* reached at (703) 305-4552.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 3015-3900.

For facsimile (fax) send to 703-7467239 official and 703-7467240 draft.

Chuck O. Kendall
Software Engineer Patent Examiner

CHAMELI C. DAS
PRIMARY EXAMINER

4/16/04